

200100075

AHIE UNIVIED SHAMES OF ANTERIOA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

MUCCES THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE SHI TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR RING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSE; OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PARTY BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'95B34'

In Testimony Mercest, I have hereunto set my hand and caused the seal of the Plant Bariety Protection Vities to be affixed at the City of Washington, D.C. this eighth day of May, in the year of our Lord two thousand one.

Medical Composition of the compo

Arting Commissioner Plant Variety Protection Office Agricultural Marketing Service

Agriculturo

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse)

•		,	1			
1. NAME OF OWNER Pioneer Hi-Bred Internation	onal, Inc.	!		2. TEMPORARY DESIGNAT EXPERIMENTAL NAME	TON OR	2. VARIETY NAME 95B34
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7300 N. W. 62 nd Avenue P. O. Box 1004 Johnston, IA 50131				5. TELEPHONE (include 515-254-2638 6. FAX (include area cod 515-253-2288	20	POR OFFICIAL USE ONLY PYRO NUMBER 0 0 7 5 FILING DATE
7. IF THE OWNER NAMED IS NOT A "PERS ORGANIZATION (corporation, partnership, Corporation	ON", GIVE FORM OF association, etc.)	8. IF INCORPORA STATE OF INCO		9. DATE OF INCORPOR	ATION	January 18,200
10. NAME AND ADDRESS OF OWNER REDATIA Schmidt, Ph.D. 7300 NW 62 nd Ave. P.O. Box 1004 Johnston, Iowa 50131-1004	Је 71 Р.	ean Bromert (100 NW 62 nd Av 0. Box 1000)	(copy) ye.	receive all papers)		FILING AND EXAMINATION FEES: \$ 2705 DATE AM 18, 200 CERTIFICATION FEES DATE AM 18, 200 DATE AM 18, 200 DATE AM 18, 200 DATE AM 18, 200 DATE AM 18, 200
11. TELEPHONE (Include area code) 515-254-2638	12. FAX (Include area code) 515-253-2288	1	MAIL dtdh@phibred	l.com	14. CRO Soybear	P KIND <i>(Common Name</i>)
verification that tissue culture wi repository)	p History of the Variety ctness on of Variety on of the Variety (Optional) usis of the Owner's Ownership untreated seeds or, for tuber propage Il be depositied and maintained in an i	aled varieties, approved public	20. DOES THE O VARIETY BE IF YES, WHICE 21. DOES THE O LIMITED AS THE ONLY	SEED? See Section 83(a) of 61 ff "yes", answer items 20 and 21 below) WNER SPECIFY THAT SEED LIMITED AS TO NUMBER OF CH CLASSES? FOUNDATION ON THE CONUMBER OF GENERATION OF THE CONUMBER OF THE CONUMBER OF GENERATION OF THE CONUMBER OF THE	OF THIS CLASSES? ATION F	NO (If "no," go to item 22) YES NO REGISTERED CERTIFIED YES NO REGISTERED CERTIFIED
22. HAS THE VARIETY (INCLUDING ANY HA FROM THIS VARIETY BEEN SOLD, DISP OTHER COUNTRIES? YES IF YES, YOU MUST PROVIDE THE DATE FOR EACH COUNTRY AND THE CIRCUIT	OSED OF, TRANSFERRED, OR USE NO OF FIRST SALE, DISPOSITION, TR	ED IN THE U.S. OR LANSFER, OR USE	PROPERTY F YES IF YES, GIVE	RIGHT (PLANT BREEDER'S RI	GHT OR PATE N OR ISSUANCE	O
24. The owners declare that a viable sample of for a tuber propagated variety a tissue cult. The undersigned owner(s) is(are) the owner and is entitled to protection under the provious owner(s) is(are) informed that false representations.	re will be deposited in a public repos or of this sexually reproduced or tuber sions of Section 42 of the Plant Variet	itory and maintained t propagated plant vari y Protection Act.	for the duration of the ety, and believe(s) th	certificate.		
SIGNATURE OF OWNER AUG. 7- Schin NAME (Please print or type)	uidt		SIGNATURE OF (
Daria H. Schmidt CAPACITY OR TITLE Director, Associative Genetics/Technology Integra		101	CAPACITY OR TI	rle	an Anna	DATE
T-470 (2-99) designed by the Plant Variety Pro	tection Office with WordPerfect 6.0a.	Replaces STD-470 (6	5-98) which is obsole	te. (See reverse for instr	uctions and in	formation collection burden statement)

Exhibit A. Origin and Breeding History of the Variety

Soybean Variety 95B34

Variety 95B34 evolved from a 1994 cross of HUTCH/YB57D(8798(8683(9593/W20)/9593)/9593).

It is an F3-derived variety, which was advanced to the F3 generation by modified single seed descent. The F4 progeny row of 95B34 was grown in the winter of 1996/97. Subsequently, 95B34 has undergone four years of extensive testing and purification and has been observed by the breeder to be uniform and stable for all plant traits from generation to generation, with no evidence of variants. On the basis of resistance to labeled rates of Sulfonylurea herbicides, yield potential, and resistance to stem canker and frogeye leaf spot, variety 95B34 was assigned a commercial number.

The purification block was grown during the summer of 1998 and 38 rows of 60 sublines grown were bulked for increase. 13 acres of 95B34 (breeders seed) were grown in the summer of 1999. 434 acres of parent seedstock (foundation seed equivalent) were grown in the summer of 2000 and 11,522 bushels harvested.

Exhibit B. Statement of Distinctness

Soybean Variety 95B34

Variety 95B34 is most similar to Variety 95B32. Both varieties have white flower color, gray pubescence, and yellow seeds with buff hila. However, 95B34 has the Als1 gene for resistance to certain sulfonylurea branded herbicides and is susceptible to Soybean Cyst Nematode races 3 and 14 whereas 95B32 does not contain the Als1 gene and is resistant to Soybean Cyst Nematode races 3 and 14. Additionally, 95B34 is susceptible to Roundup branded herbicides while 95B32 is resistant to Roundup branded herbicides.

Variety 95B34 is also similar to A5112 from Asgrow Seeds. Both varieties have white flowers, gray pubescence, and yellow seeds with buff hila. However, 95B34 has the Als1 gene for resistance to certain sulfonylurea branded herbicides and is susceptible to Soybean Cyst Nematode races 3 and 14 whereas 95B32 does not contain the Als1 gene and is resistant to Soybean Cyst Nematode races 3 and 14.

Variety 95B34 is also similar to AG5401 from Asgrow Seeds. Both varieties have white flowers, gray pubescence, and yellow seeds with buff hila. However, 95B34 has the Als1 gene for resistance to certain sulfonylurea branded herbicides and is susceptible to Soybean Cyst Nematode race 3 whereas AG5401 does not contain the Als1 gene and is resistant to Soybean Cyst Nematode races 3. Additionally, 95B34 is susceptible to Roundup branded herbicides while AG5401 is resistant to Roundup branded herbicides.

Variety 95B34 is also similar to S51-T1 from Novartis Seeds. However, 95B34 has the Als1 gene for resistance to certain sulfonylurea branded herbicides and is susceptible to Soybean Cyst Nematode race 3 whereas S51-T1 does not contain the Als1 gene and is moderately resistant to Soybean Cyst Nematode races 3. Additionally, 95B34 is susceptible to Roundup branded herbicides while S51-T1 is resistant to Roundup branded herbicides.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

EXHIBIT C (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max (L.) Merr.)

NAME OF AP					FOR OFFICIAL USE ONLY
Pioneer	Hi-Bred Internat	cional, Inc.			PVPO NUMBER O O O O
ADDRESS (Str	reet and No. or R.F.D. No., C W. 62 nd Avenue	ity, State, and ZIP Code)			VARIETY NAME 2 0 0 1 0 0 0
P. O. Bo					95B34
Johnston	, IA 50131				TEMPORARY OR EXPERIMENTAL
					DESIGNATION
PLEASE R	EAD ALL INSTRUC	FIONS CAREFULLY: Place	e the appropriate number	that describes the var	ietal character of this variety in the boxes
Place a zero quantitativo		9 9 9 or	0 9) when numb	oer is either 99 or less o	or 9 or less respectively. Data for
plant chara	cters should be based	on a minimum of 100 plant	s. Comparative data shou	ıld be determined fron	varieties entered in the same trial. Royal
		gnized color standard may			em used:
		ur variety; lack of response	may delay progress of yo	ur application.	
A. MORI	PHOLOGY				
Seed Shape	e:				
2	1 = Spherical (L/W, L/T, and	T/W ratios < 1.2)	2 = Spherica (L/W ratio	al-Flattened > 1.2; L/T ratio <	< 1.2)
	3 = Elongate (L/T ratio > 1.	2; T/W ratio < 1.2)	4 = Elongat (L/T ratio >	e-Flattened · 1.2;T/W ratio >	1.2)
Seed Coat	Color:	,			
1	1 = Yellow	2 = Green	3 = Brown	4 = Black	5 = Other (Please Specify)
Seed Coat	Luster:				
1	1 = Dull	2 = Shiny			
Seed Size:					
1 3	grams/100 s	eeds			
Hilum Colo	or:		•		
1	1 = Buff 6 = Black	2 = Yellow 7 = Other (<i>Pleas</i>	3 = Brown se Specify)	4 = Gray	5 = Imperfect Black

A. MORPHOLOGY (Continued)

Cotyledon Color:

 $\boxed{1} \quad 1 = \text{Yellow} \qquad 2 = \text{Green}$

Seed Protein Peroxidase Activity:

 $\boxed{2} \quad 1 = Low \qquad 2 = High$

Hypocotyl Color:

1 = Green 2 = Green with Bronze 3 = Light Purple 4 = Dark Purple extending to unifoliolate leaves ('Hodgson', ('Woodworth' or 'Tracy') ('Beeson' or 'Pickett 71') 'Coker', or 'Hampton 266A')

Leaflet Shape:

3 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Please Specify)

Flower Color:

 $1 \quad 1 =$ White 2 = Purple 3 = White with a Purple Throat

Pod Color:

Pubescence Color:

1 1 = Gray 2 = Brown (Tawny) 3 = Light Tawny

Plant Habit:

1 1 = Determinate 2 = Semi - Determinate 3 = Indeterminate 4 = Intermediate

Maturity Group:

Maturity Subgroup:

Please enter a value from 0 - 9

B. DISEASE REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Bacterial

Bacterial Pustule (Xanthomonas campestris pv. glycines (Nakano) Dye)

Bacterial Blight (Pseudomonas syringae pv. glycinea (Coerper) Young, Dye, & Wilkie)

Wildfire Blight (Pseudomonas syringae pv. tabaci (Wolf & Foster) Young, Dye, & Wilkie)

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B. DI	SEASE REACTIONS (Continu	ued) 0 = Not Tested	1 = Susceptible	2 = Resistant 3 4 Tolerant 7 5
Fungal				
1	Brown Spot (Septoria glycine	s Hemmi)		
	Frogeye Leaf Spot (Cercospor	ra sojina Hara)		
0	race 1	0 race 2	0 race 3	0 race 4
2	race 5	0 race 6	Other	(Please Specify)
0	Target Spot (Corynespora cas	siicola (Berk. & Curt.) We	ei)	
0	Downey Mildew (Peronosporo	trifoliorum var. manchur	rica (Naum.) Syd. ex (Gäum)
0	Powdery Mildew (Microsphae	ra diffusa Cke. & Pk.)		
0	Brown Stem Rot (Phialophore	a gregata (Allington & Cha	mberlain) W. Gams.)	
2	Stem Canker (Diaporthe phas	eolorum (Cke. & Ell.) Saco	c. var. <i>caulivora</i> Atho	w & Caldwell)
1	Pod and Stem Blight (Diaport	he phaseolorum (Cke. & E	ll.) Sacc. var. <i>sojae</i> (I	ehman) Wehm.)
0	Purple Seed Stain (Cercospore	a kikuchii (T. Matsu. & To	omoyasu) Gardener)	
1	Rhizoctonia Root Rot (Rhizoc	tonia solani Kühn)		
Phytoph	thora Root Rot (Phytophthora	megasperma Drechs. f. sp	. glycinea (Kuan & Ei	win))
1	race 1 0 race 8	0 race 15	0 race 22	
0	race 2 0 race 9	0 race 16	0 race 23	
1	race 3 race 10	0 race 17	0 race 24	
0	race 4 0 race 11	0 race 18	1 race 25	·
1	race 5 0 race 12	0 race 19	0 race 26	
0	race 6 0 race 13	0 race 20	Other (Please S	(pecify)
1 1	race 7 0 race 14	0 race 21		
1	Bud Blight (Tobacco Ringspot	Virus)		
	Yellow Mosaic (Bean Yellow N	Aosaic Virus)		

B. DISEASE REACTIONS (Continued)	0 = Not Tested 1 = Susceptible	2 = Resistant 3 = Tolerant 0	7 -
1 Cowpea Mosaic (Cowpea Chlorotic	Virus)		
Pod Mottle (Bean Pod Mottle Virus)	ı		
Seed Mottle (Soybean Mosaic Virus)	ı		
Nematode			
Soybean Cyst Nematode (Heterodera glycines	Ichinohe)		
0 race 1 0 race 4 0 race 2 0 race 5	0 race 9	•	
1 race 3 0 race 6	Other (Please Specify)		
0 Lance Nematode (Hoplolaimus colum	ubus Sher)		
O Southern Root Knot Nematode (Mele	oidogyne incognita (Kofoid & White) Chi	itwood)	
0 Northern Root Knot Nematode (Mele	oidogyne hapla Chitwood)		
1 Peanut Root Knot Nematode (Meloid	ogyne arenaria (Neal) Chitwood)		
0 Reniform Nematode (Rotylenchus ren	niformus Linwood & Olivera)		
Javanese Nematode (Meloidogyne java	anica (Treub) Chitwood)		3
Other Nematode (Please Specify)			
C. PHYSIOLOGICAL RESPONSES	0 = Not Tested 1 = Susceptible	2 = Resistant 3 = Tolerant	•
Iron Chlorosis on Calcareous Soil			
0 Phosphorus	Other (Please Specify)		
0 Boron			
0 Aluminum		,	
0 Salt			
0 Drought			

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	SECT REACTIONS	0 = Not Tested	1 = Susceptible	2 = Resistant	3 = Tolerant
0	Mexican Bean Beetle (Epilachna v	arivestis Mulsant)			
0	Potato Leaf Hopper (Empoasca fac	bae (Harris))			4
	Other (Please Specify)				
E. HI	ERBICIDE REACTIONS	0 = Not Tested	1 = Susceptible	2 = Resistant	
2	Metribuzin				
0	Bentazone				
2	Sulfonylurea				
1	Glyphosate				
0	Glufosinate				
0	Pendimethalin		•		
	Other (Please Specify)				
F. TR	ANSGENIC COMPOSITION				
or, the	development of the subject variety removal of genetic material from th blease complete the following inform	e application variety?		<u> </u>	other than a soybean, YES NO
1. Plea	ase state the vector's name:				
2. Plea	ase state the vector components:				
3. Plea	ase describe the genetic material suc	cessfully transferred	into the subject varie	ty:	
4. Plea	ase describe the insertion protocol:				
	terature citation(s) explaining the four transgenic Composition portion (sts above may be an a	acceptable alterna	ntive to completion of

G. BIOCHEMICAL MARKERS

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Please describe any biochemical information here, which you believe will be helpful in further describing the subject variety (e.g. Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

H. COMMENTS

Exhibit D. Additional Description of the Variety

Soybean Variety 95B34

In Exhibit C we have identified variety 95B34 as susceptible to bacterial blight, brown spot, pod and stem blight, rhizoctonia root rot, bud blight, yellow mosaic, cowpea mosaic, pod mottle and seed mottle.

This does not mean that variety 95B34 is any worse for these problems than other varieties of similar maturity. Rather, we do not consider 95B34 to be immune to these problems. Therefore, we have chosen to be conservative and have identified the line as "susceptible".

Variety 95B34 is a mid Group V variety. If Group V varieties are divided into tenths, the relative maturity of 95B34 is 5.4.

REPRODUCE LOCALLY. Include form number and edition date on a		ORM APPROVED - OMB No. 0581-005
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE	The following statements are made in 1974 (5 U.S.C. 552a) and the Paper	
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to det certificate is to be issued (7 U.S.C. 2-confidential until the certificate is issued.	421). The information is held
NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	2. VARIETY NAME
Pioneer Hi-Bred International, Inc.	OR EXPERIMENTAL NUMBER	95B34
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (Include area code)	6. FAX (Include area code)
7300 NW 62 nd Avenue	515-254-2638	515-253-2288
P. O. Box 1004 Johnston, IA 50131-1004	7. PVPO NUMBER	
	7. F V FO NOWIDER	
8. Does the applicant own all rights to the variety? Mark an "X" in the lf no, please explain.	ne appropriate block.	075 X YES NO
9. Is the applicant (individual or company) a U.S. National or a U.S. If no, give name of country	based company?	X YES NO
•		IN TES INO
10. Is the applicant the original owner?	if no, please answer one of the foll	owing:
a. If the original rights to variety were owned by individual(s), is		ai(S) ?
YES NO If no, give name of count		
 b. If the original rights to variety were owned by a company(ies)), is (are) the original owner(s) a U.S. ba	sed company?
YES NO If no, give name of count	rv	
11. Additional explanation on ownership (If needed, use the reverse	for extra space);	
		,
Please Note:		
Plant variety protection can only be afforded to the owners (not licen	sees) who meet the following criteria:	
 If the rights to the variety are owned by the original breeder, that p national of a country which affords similar protection to nationals of 	erson must be a U.S. national, national of the U.S. for the same genus and speci	of a UPOV member country, or es.
If the rights to the variety are owned by the company which emplo nationals of a UPOV member country, or owned by nationals of a genus and species.		
3. If the applicant is an owner who is not the original owner, both the	original owner and the applicant must m	eet one of the above criteria.
The original breeder/owner may be the individual or company who di Act for definitions.	rected the final breeding. See Section 4	1(a)(2) ot the Plant Variety Protection
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a for this information collection is 0581-0055. The time required to complete this information of instructions, searching existing data sources, gathering and maintaining the data needed, a	collection is estimated to average 6 minutes per respo	nse, including the time for reviewing the
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Fo file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Wash opportunity employer.	ington, D.C. 20250, or call 1-800-245-6340 (voice) or	(202) 720-1127 (TDD). USDA is an equal
TD-470-E (07-97) (Destroy previous editions). Electronic version des	signed using WordPerfect InForms by US	SDA-AMS-IMB.